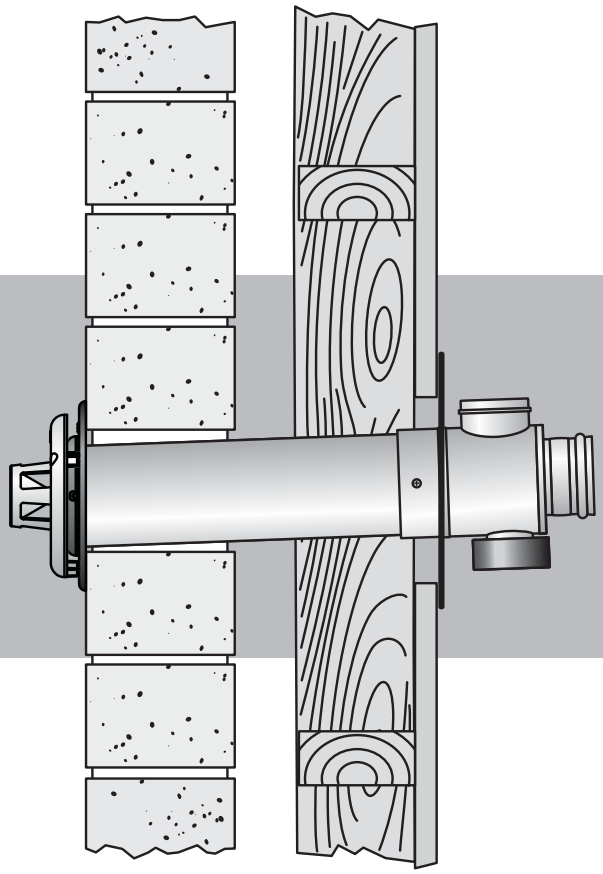
Rinnai

Power Flued Flamefire Space Heater Co-axial Flue System Installation Manual



To Suit Model:
Power Flued Flamefire
Aspiration RHFE-750ETR
RHFE-752ETR

These components shall be installed in accordance with:

- Manufacturer's Installation Instructions
- Current AS/NZS 3000, AS/NZS 3500 & AS/NZS 5601
- Local Regulations and Municipal Building Codes

THESE COMPONENTS MUST BE INSTALLED, SERVICED AND REMOVED BY AN AUTHORISED PERSON!

ONLY THE FLUE SYSTEM COMPONENTS SPECIFIED IN THIS MANUAL MUST BE USED. COMPONENTS NOT SPECIFIED IN THIS MANUAL, WHETHER MANUFACTURED BY RINNAI OR OTHERWISE, ARE NOT COMPATIBLE AND "MUST NOT" BE USED!

The Australian Gas Association
All Rinnai gas products are A.G.A. certified.

Part No. 15401082

TABLE OF CONTENTS

CONVENTIONS USED IN THIS MANUAL 1
REGULATIONS, CLEARANCES & GENERAL INFORMATION 2
FLUE TRANSITION CONNECTIONS 3
LOCATION 3
LUBRICATING INNER PIPE COMPONENTS 3
INSTALLATION CONFIGURATIONS 4
WALL PENETRATIONS 6
FLUE COMPONENTS 7
FLUE COMPONENT ASSEMBLY 8
CREATING A "DIRECT" FLUE INSTALLATION 8
CREATING A "DIRECT EXTENDED" FLUE INSTALLATION 9
CREATING AN "EXTERNAL WALL" FLUE INSTALLATION 10
CREATING A "INTERNAL WALL" FLUE INSTALLATION 12
CREATING A "SIDEWAYS" FLUE INSTALLATION 13
CREATING AN "UNDER FLOOR" FLUE INSTALLATION 15
CUTTING ~ ASPDFK, ESPIPE900 & ESROOFCOWL 17
COMPONENT ASSEMBLY & CONNECTION ~ ESPIPE900 17
ASSEMBLING WALL TERMINAL ~ ASPDFK & ESPIPE900 18
ASSEMBLING AN ON-WALL TERMINAL ~ ESWTKIT, ESBEND & ESPIPE900 18
COMPONENT ASSEMBLY & CONNECTION ~ ESBEND 19
COMPONENT ASSEMBLY & CONNECTION ~ ESCONDK 19
COMPONENT ASSEMBLY & CONNECTION ~ ESROOFCOWL 19
CONNECTING HEATER EXHAUST & AIR SUPPLY 20
CONNECTING HEATER EXHAUST 20
CONNECTING COMBUSTION AIR HOSE 20
CONNECTING CONDENSATE DRAIN TUBE TO HEATER 21
CONTACT INFORMATION 22

The Rinnai Aspiration (RHFE-750ETR & RHFE-752ETR) Co-axial flue is certified as part of the Aspiration Flame Fire Heater.

Only an authorised person must install, service and remove the heater & flue system.

Only the flue system components described in this manual must be used.

Components that are not described in this manual, whether manufactured by Rinnai or otherwise, are not compatible and must not be used. Rinnai appliance warranty conditions may be voided if non Rinnai flue components are fitted.

CONVENTIONS USED IN THIS MANUAL

The following symbols are used to highlight specific requirements during installation steps.

CLEARANCES

Where required clearances will be provided and must be observed.

FALL

Ensure that the specified 2° fall is maintained to either the terminal or condensate trap.

MEASURE

Required measurements will be provided and MUST BE observed for correct installation.

CUT

Cut as required to the specified measurements.

FINISH

Ensure that burrs and swarf are removed from all cut ends.

DISCARD

Denotes items that are not required for the specific installation.

OBSERVE CORRECT ORIENTATION

Where specified ensure that components are installed with the correct vertical or horizontal orientation.

LUBRICATE

Use the supplied container of silicon grease to lubricate components. ⊘ **DO NOT** use other lubricants as these may damage the flue components.

SECURE

Where specified secure components with either installer provided or component supplied fixings.

DO NOT

Failure to observe ⊘ **DO NOT** instructions will void the warranty of an appliance and may cause injury or death.

NOTE / IMPORTANT

Important notes or general hints and guides provided to ease the installation.

CAUTION

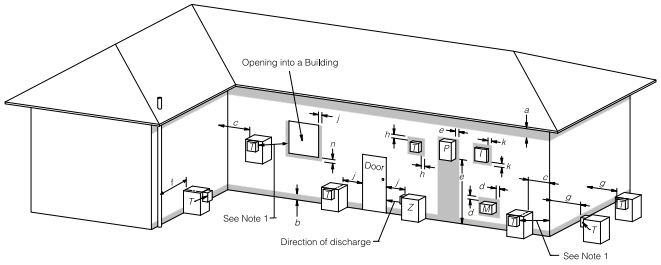
Caution notes and or warnings that **MUST BE** observed for safe and correct installations.

REGULATIONS, CLEARANCES & GENERAL INFORMATION

The heater and the flue system shall be installed in accordance with the following:

- The requirements of the current version of AS/NZS 5601 (Gas Installations)
  Note that AS/NZS 5601 is referred to in this instruction and was current at the time of printing, but may have since been superseded. It is the Installer's responsibility to ensure that requirements of the current version of AS/NZS 5601 are met.
- Manufacturers installation instructions.
  Before commencing an installation, read the installation sections of the 'Customer and Installation Manual' supplied with the heater.
- Local & Municipal building codes.
- Any other relevant Statutory Regulation.
- Rinnai Aspiration flame fires when correctly installed with Rinnai approved flue components are room-sealed appliances and no internal ventilation is required.
- Rinnai Aspiration flame fires are fan-assisted. Therefore the fan assisted flue clearance dimensions from AS/NZS 5601 extract shown on this page must be used.
- The outer plastic section of the co-axial flue complies with temperature hazard requirements and can be installed with zero clearance to combustible material.
- Vertical clearances when using a roof terminal (ESROOFCOWL) are shown in Fig.1.

  If in doubt contact the Rinnai Australia Technical Helpline (number on the back page).



T = Flue terminal *Z* = Fan assisted flue appliance only *M* = Gas meter *P* = Electricity meter or fuse box *I* = Mechanical air inlet

Shading indicates prohibited areas for flue terminals

Ref.	Item	Min. clearances (mm) Natural draft	Fan assisted
a	Below eaves, balconies and other projections:		
	• *Appliances* up to 50 MJ/h input	300	200
	• *Appliances* over 50 MJ/h input	500	300
b	From the ground, above a balcony or other surface *	300	300
c	Front a return wall or external corner *	500	300
d	From a gas *meter* (M) (see 5.11.5.9 for vent terminal location of *regulator*) (see Table 6.6 for New Zealand requirements)	1000	1000
e	From an electricity *meter* or fuse box (P) †	500	500
f	From a drain pipe or soil pipe	150	75
g	Horizontally from any building structure* = or obstruction facing a terminal	500	500
h	From any other *flue terminal* , cowl, or combustion air intake †	500	300
j	Horizontally from an openable window, door, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:		
	• *Appliances* up to 150 MJ/h input *	500	300
	• *Appliances* over 150 MJ/h input up to 200 MJ/h input *	1500	300
	• *Appliances* over 200 MJ/h input up to 250 MJ/h input *	1500	500
	• *Appliances* over 250 MJ/h input *	1500	1500
	• All fan-assisted *flue appliances* , in the direction of discharge	-	1500
k	From a mechanical air inlet, including a spa blower	1500	1000
n	Vertically below an openable window, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:		
	• Space heaters up to 50 MJ/hr input	150	150
	• Other *appliances* up to 50 MJ/hr input	500	500
	• *Appliances* over 50 MJ/h input and up to 150 MJ/h input	1000	1000
	• *Appliances* over 150 MJ/h input	1500	1500

* - unless *appliance* is *certified* for closer installation

† - Prohibited area below electricity meter or fuse box extends to ground level.

NOTES:

1 Where dimensions *c, j* or *k* cannot be achieved an equivalent horizontal distance measured diagonally from the nearest discharge point of the terminal to the opening may be deemed by the Technical Regulator to comply.

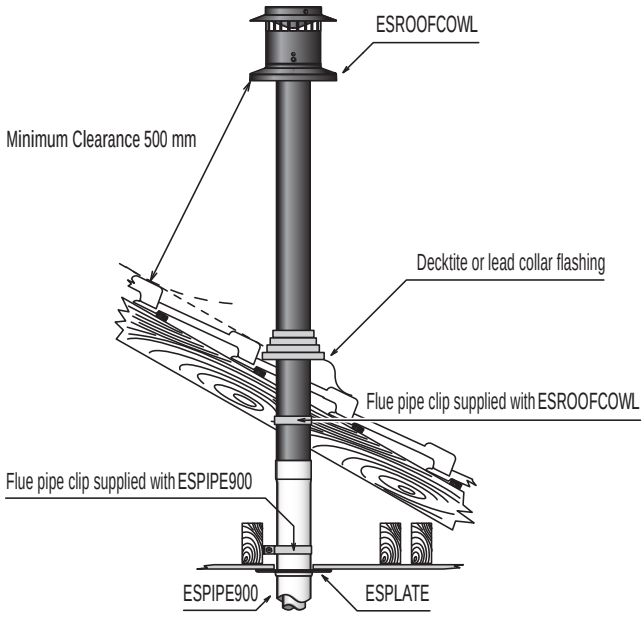
2 See Clause 6.9.4 for restrictions on a *flue terminal* under a covered area.

3 See Figure J3 for clearances required from a *flue terminal* to an LP Gas *cylinder*. A *flue terminal* is considered to be a source of ignition.

4 For *appliance* s not addressed above acceptance should be obtained from the Technical Regulator.

FIGURE 6.2 (in-part) MINIMUM CLEARANCES REQUIRED FOR BALANCED FLUE TERMINALS, FAN-ASSISTED FLUE TERMINALS, ROOM-SEALED APPLIANCE TERMINALS AND OPENINGS OF OUTDOOR APPLIANCES

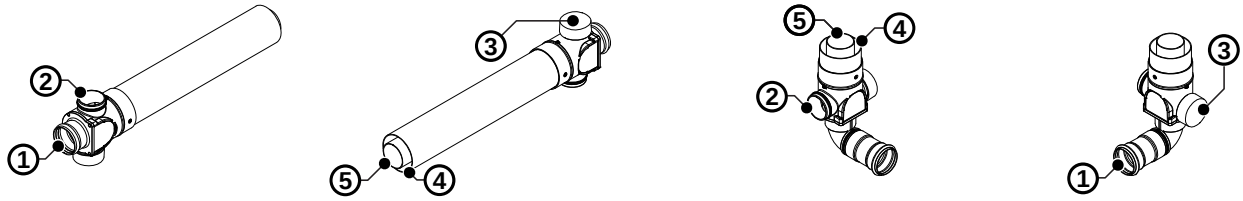
Horizontal Clearances (Extract AS/NZS 5601 Fig. 6.2)



Vertical Clearances Fig.1

REGULATIONS, CLEARANCES & GENERAL INFORMATION

FLUE TRANSITION CONNECTIONS



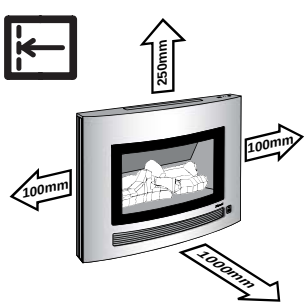
① Flue exhaust connection to heater. ② Combustion air inlet connection to heater (Left hand ~ Large connection for model RHFE750ETR & RHFE752ETR heaters only the Right hand ~ Small connection not used). ③ Rubber combustion air inlet cap (when supplied) is designed to fit both the large and small combustion air inlet and MUST cover the air inlet not in use. ④ Combustion air inlet. ⑤ Exhaust outlet.

LOCATION

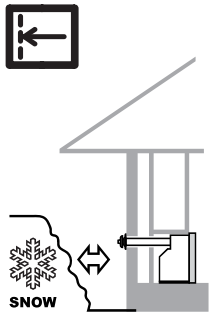
This appliance is **NOT** suitable for inbuilt installations.

This appliance **MUST NOT** be installed where curtains or other combustible materials could come into contact with it. In some cases curtains may need restraining.

Heat emanating from the front of this appliance may over time affect the appearance of some materials used for flooring such as carpet, vinyl, cork or timber. This effect may be amplified if the air in the room contains cooking vapours or cigarette smoke. To avoid this possibility, it is recommended that a mat be placed in front of the appliance, extending at least 750mm in front of it.



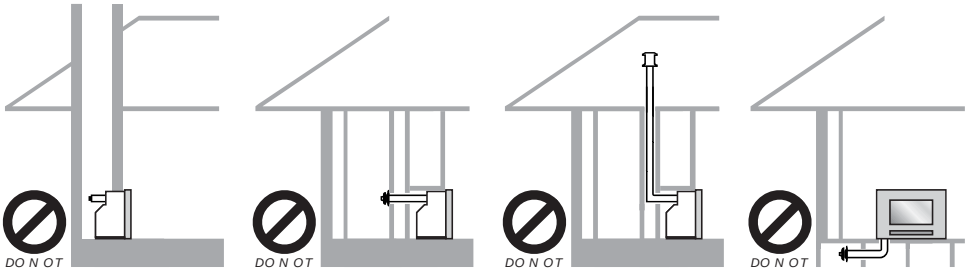
The above diagram shows the clearances required around this heater whilst in operation .



The flue terminal **MUST BE** positioned away from flammable materials.

In areas subject to heavy snowfall, keep snow clear of flue terminal at all times.

- **DO NOT** flue into natural draught flues or fireplaces.
- **DO NOT** flue into other rooms, roof spaces or into under floor spaces.
- **DO NOT** Install the heater in an unusually dusty area.



IMPORTANT **For other important information regarding the location of the heater refer to the instructions supplied with the appliance.**

LUBRICATING INNER PIPE COMPONENTS

The inner flue pipe joints are sealed with an “O” ring seal.

To ease assembly, a small plastic tub of silicone grease is provided with the Direct Flue Kit 750 (ASPDFK) and the Flue Adaption Kit 750 (ASPKIT03). Use this silicone grease to lubricate the “O” ring on the inner pipes prior to assembly.

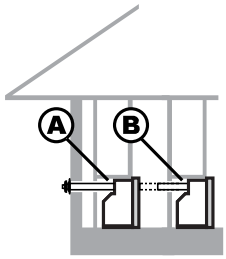
CAUTION **Use ONLY the supplied silicone based “O Ring” seal lubricant.**

DO NOT use petroleum based lubricants such as petroleum jelly. Petroleum jelly or similar petroleum based lubricants will cause deterioration of the “O” ring seals.

INSTALLATION CONFIGURATIONS

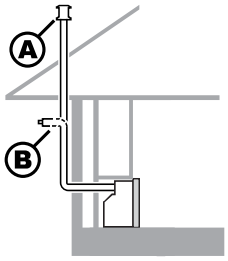
The following configurations are currently available. For alternative configurations contact Rinnai.

DIRECT/EXTENDED



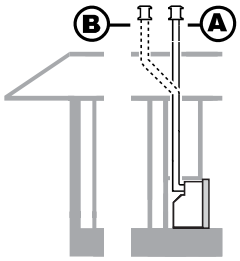
Components			
Option A (Direct)		**Option B (Direct Extended)**	
Direct Flue Kit 750	ASPDFK	Direct Flue Kit	ASPDFK
		Co-Ax Pipe 900mm (Optional) #	ESPIPE900

EXTERNAL WALL



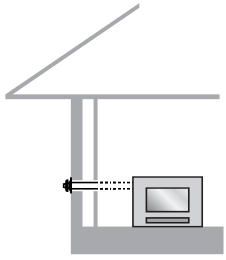
Components			
Option A (Vertical Termination)		**Option B (On Wall Termination)**	
Direct Flue Kit 750	ASPDFK	Direct Flue Kit 750	ASPDFK
Co-Ax Pipe 900mm #	ESPIPE900	Co-Ax Pipe 900mm #	ESPIPE900
Bend (2 x 45º)	ESBEND	Bend (45º) x2	ESBEND
Condensate Trap	ESCONDK	Condensate Trap	ESCONDK
Roof Cowl	ESROOFCOWL	Wall Terminal Kit	ESWTKIT

INTERNAL WALL



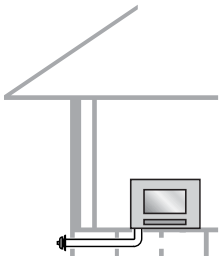
Components			
Option A (Direct)		**Option B (Offset)**	
Flue Adaption Kit 750 §	ASPKIT03	Flue Adaption Kit 750 §	ASPKIT03
Co-Ax Pipe 900mm #	ESPIPE900	Co-Ax Pipe 900mm #	ESPIPE900
Roof Cowl	ESROOFCOWL	Bend (45º) x2	ESBEND
		Roof Cowl	ESROOFCOWL

SIDEWAYS



Components	
Flue Adaption Kit 750 §	ASPKIT03
Co-Ax Pipe 900mm #	ESPIPE900
Terminal Kit	ESWTERM

UNDER FLOOR



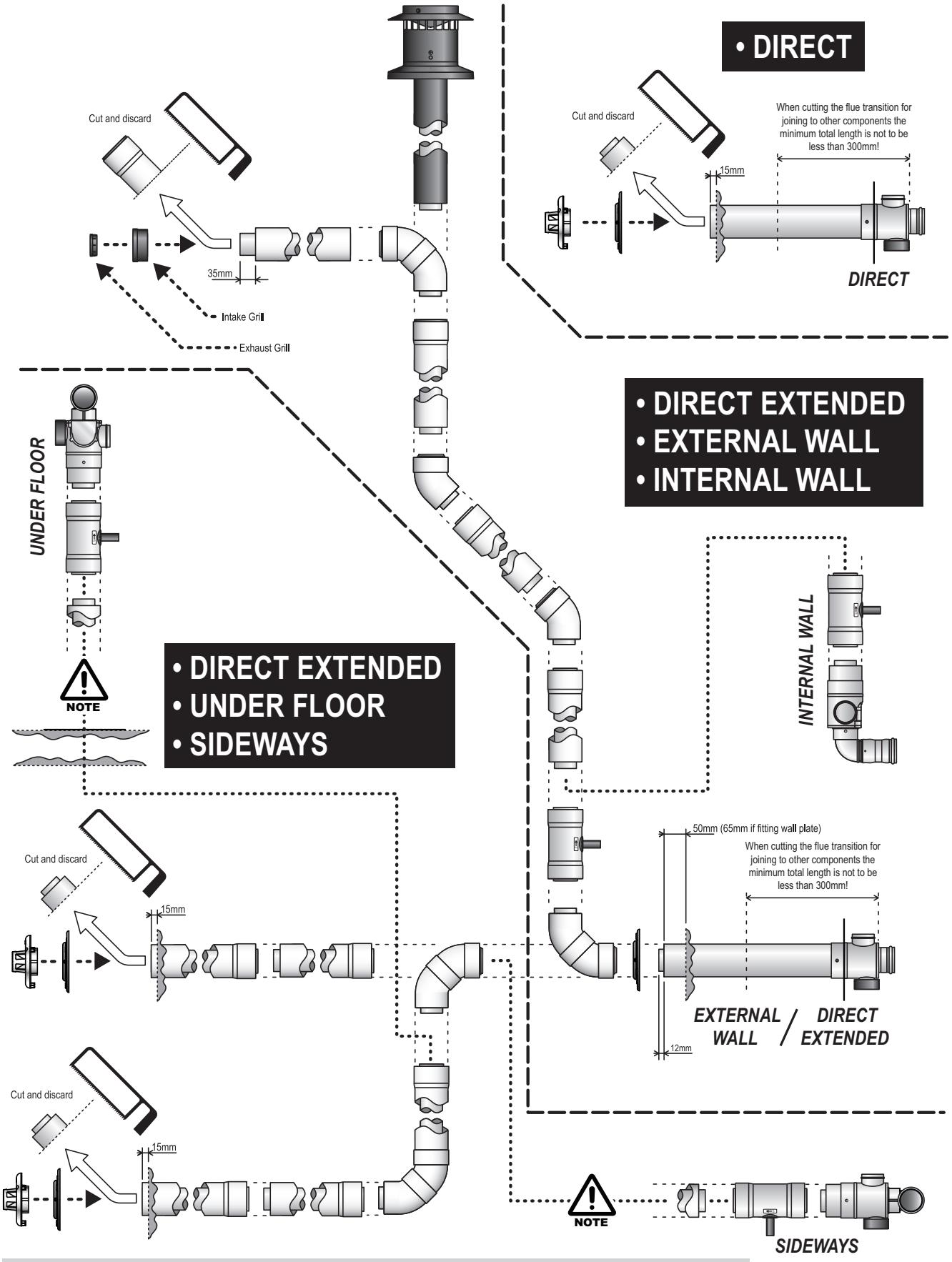
Components	
Flue Adaption Kit 750 §	ASPKIT03
Co-Ax Pipe 900mm #	ESPIPE900
Bend (2 x 45º)	ESBEND
Terminal Kit	ESWTERM

 # Order lengths as required *§ Includes Condensate Trap (ESCONDK)*

IMPORTANT

Total flue length may be up to 6.5 metres with 2 x 90° bends when going straight out of the back of the appliance. A maximum flue length of 8.5 metres x zero bends is permissible provided no bend is used in the flue transition connection. Note: The aluminium flue transition connection may contain one bend and this is counted as 1 (one) x 90° bend.

INSTALLATION CONFIGURATIONS



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WALL PENETRATIONS

It is critical that any wall penetrations are located correctly.

CAUTION

The enclosure dimensions specified are critical to the successful installation of this appliance and MUST BE strictly adhered to.

Ensure there are no wall studs, noggins, wiring or other obstruction within the wall cavity where the flue is proposed to penetrate.

Ensure the location of the flue terminal can comply with the requirements of AS/NZS 5601. Figure 6.2 from AS/NZS 5601 and additional information is shown on page 2.

Especially relevant is the requirement to have a minimum of 300mm clearance between the flue terminal and the finished ground level. It is not permissible to excavate a hole to obtain the required 300mm clearance, unless there is sufficient drainage provision.

Ensure the penetration points are marked accurately as this is critical for successful appliance installation.

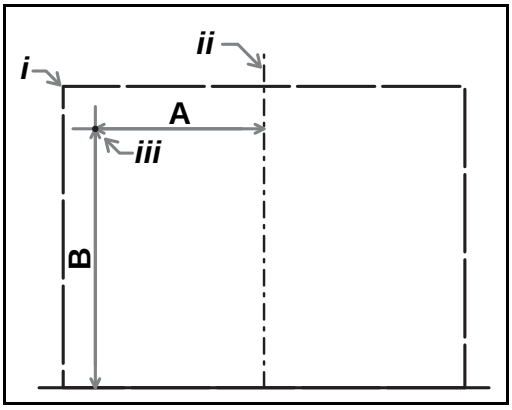
The penetration for the flue pipe only needs to be made for 'Direct' and 'Direct Extended' flue installations, where the flue terminal is located directly to the rear of the appliance.

If no flue pipe penetration is required the markings are still useful for indicating the correct position of flue exhaust connection of 'Sideways', 'External Wall', 'Internal Wall' and 'Under Floor' flue applications.

IMPORTANT

When creating penetrations for flue system installations other than 'Direct' and 'Direct Extended' the minimum diameter required for the wall penetration of PVC external pipes is 80mm.

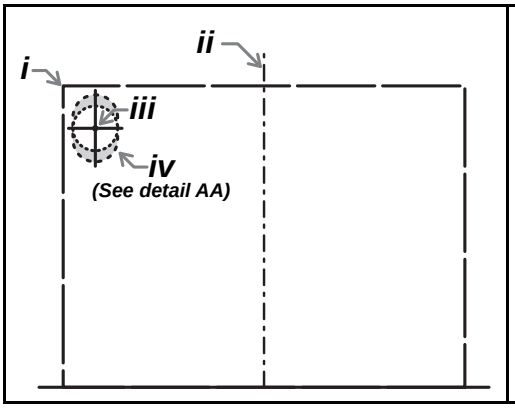
On all 'Sideways' and 'Under Floor' flue applications, allow for a continuous 2° fall from the heater connection point to the wall terminal.

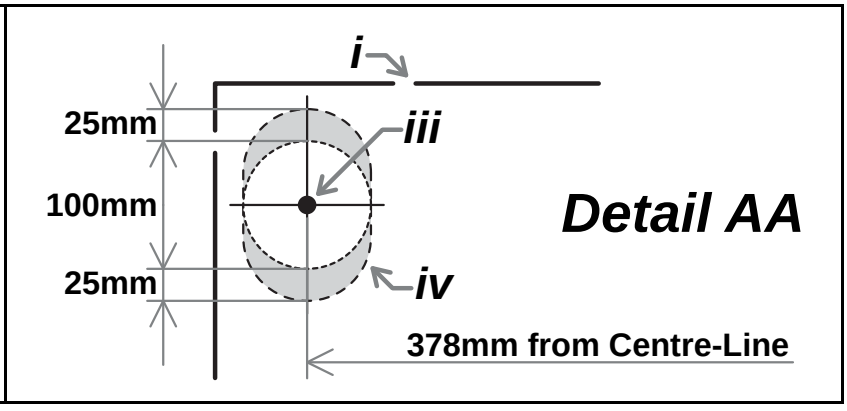


1. Select the desired location ***i*** for the Heater.
2. Find the vertical centre line of the appliance ***ii*** and mark this location on the wall.
3. Mark off a point ***iii*** that is ***A*** 378mm to the left of the centre line and ***B*** 580mm from the base.
4. Make a 100mm penetration ***iv*** at point ***iii***.

IMPORTANT

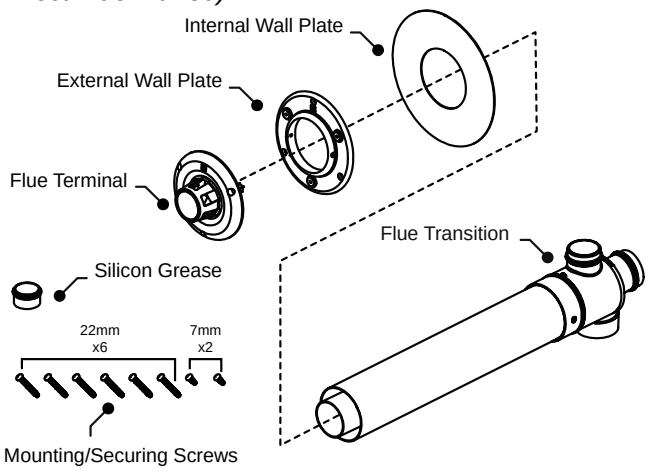
The penetration *iv* MUST BE aligned accurately in the horizontal plane, however the penetration can be plus or minus 25mm in the vertical plane (see detail AA).



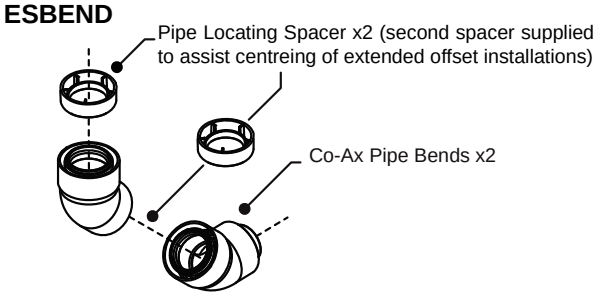


FLUE COMPONENTS

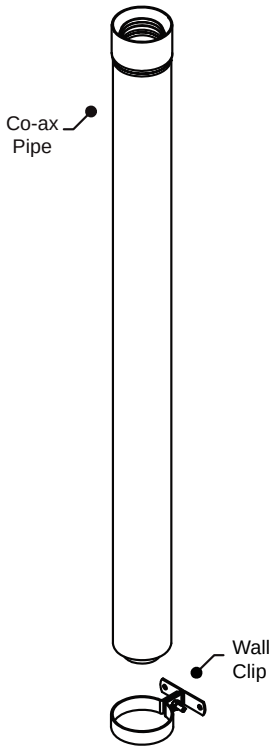
ASPDFK
(Direct Flue Kit 750)



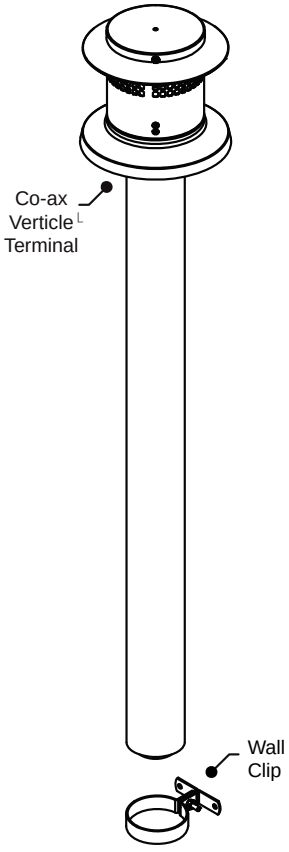
ESBEND


Pipe Locating Spacer x2 (second spacer supplied to assist centreing of extended offset installations)
Co-Ax Pipe Bends x2

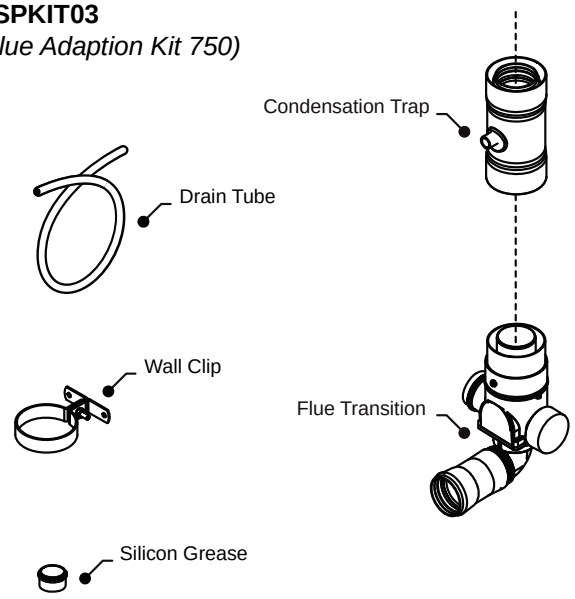
ESPIPE900



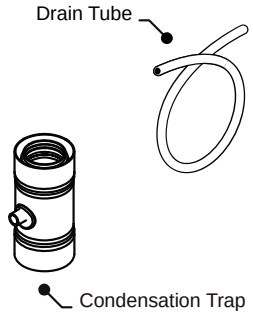
ESROOFCOWL



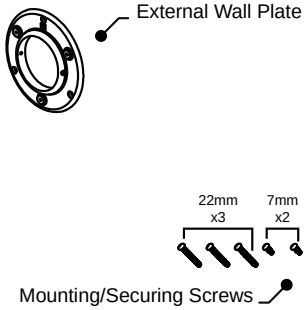
ASPKIT03
(Flue Adaption Kit 750)



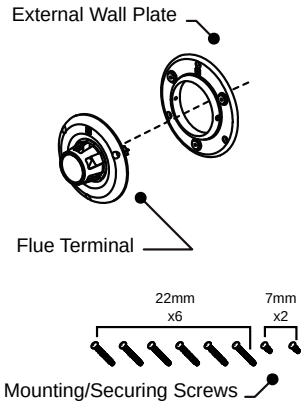
ESCONDK
(Condensate Trap Kit)



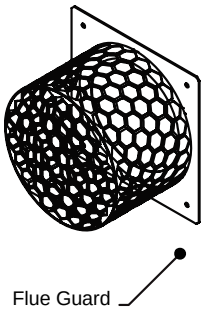
ESPLATE



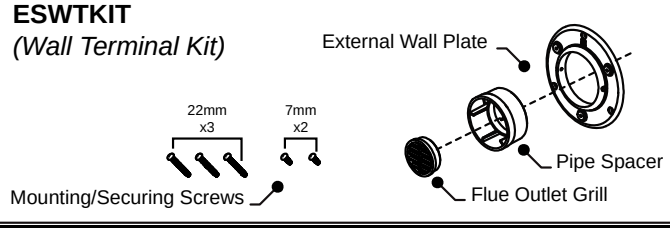
ESWTERM



ESWFG

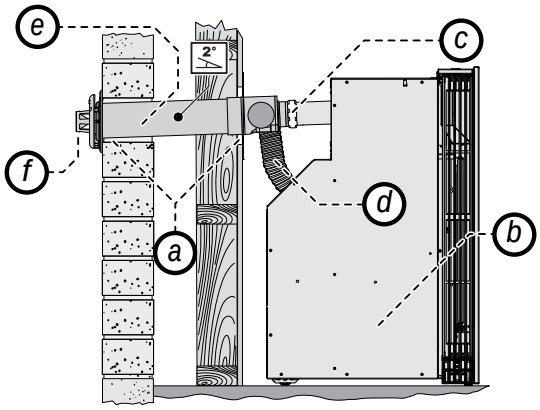


ESWTKIT
(Wall Terminal Kit)



FLUE COMPONENT ASSEMBLY

CREATING A "DIRECT" FLUE INSTALLATION



Activities for creating a Direct flue installation:

a. Create Wall Penetration.

b. Locate Heater.

c. Connect Heater Exhaust. CAUTION

d. Connect Combustion Air Hose. CAUTION

e. Cut Components (As Required).

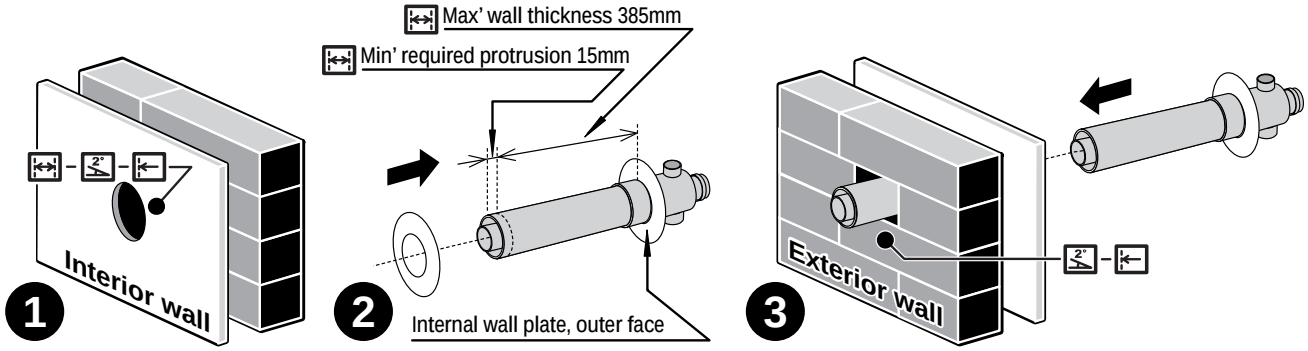
f. Assemble Wall Terminal.

z. Finalise Installation & Commissioning Of Heater.

Follow steps 1 through 5 from the chapter "Heater Installation" in the "Rinnai ASPIRATION Operation / Installation Manual" supplied with the heater.

The Direct flue kit 750 (ASPDFK) is suitable for walls up to 385mm thick. ASPDFK can be cut to length to suit wall thicknesses less than 385mm thick. For wall thicknesses greater than 385mm Co-ax Pipe(s) (ESPIPE900) can be fastened onto ASPDFK to extend the flue length. Refer to the section "CREATING A "DIRECT EXTENDED" FLUE INSTALLATION" on page 9 for details.

Steps for creating a DIRECT flue installation are as follows:



1. Create the wall penetration(s) in accordance with the section "WALL PENETRATIONS" on page 6.

   The minimum diameter required for wall the penetration for a DIRECT flue installation is 80mm to noncombustible surfaces such as brick and 100mm to combustible surfaces such as plaster.

   Allow for a continuous 2° fall from the heater connection point to the wall terminal.

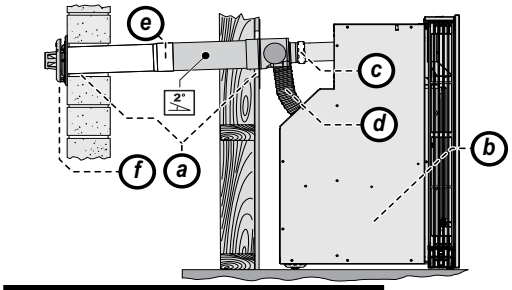
2. Slide the internal wall plate over the terminal end of the ASPDFK pipe until it is nested on the raised ring of the flue transition.
3. Pass the ASPDFK through the internal wall penetration until the internal wall plate is flush with the wall.
4. Create the wall terminal in accordance with "ASSEMBLING WALL TERMINAL ~ ASPDFK & ESPIPE900" on page 18.
5. Move the heater into place and make the heater exhaust and combustion air hose connections in accordance with the section "CONNECTING HEATER EXHAUST & AIR SUPPLY" on page 20.

CAUTION **Air hose and heater exhaust connections at the heater MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.**

6. Follow steps 6 through 11 from the chapter "Heater Installation" in the "Rinnai ASPIRATION Operation / Installation Manual" supplied with the heater and complete the installation and commissioning of the heater in accordance with these.

FLUE COMPONENT ASSEMBLY

CREATING A "DIRECT EXTENDED" FLUE INSTALLATION



Total flue length can be up to 6.5 metres with 2 bends or 8.5 metres with zero bends.

Activities for creating a Direct Extended flue installation:

a. Create Wall Penetration.

b. Locate Heater.

c. Connect Heater Exhaust. CAUTION

d. Connect Combustion Air Hose. CAUTION

e. Cut, Fit & Secure Components (As Required). CAUTION

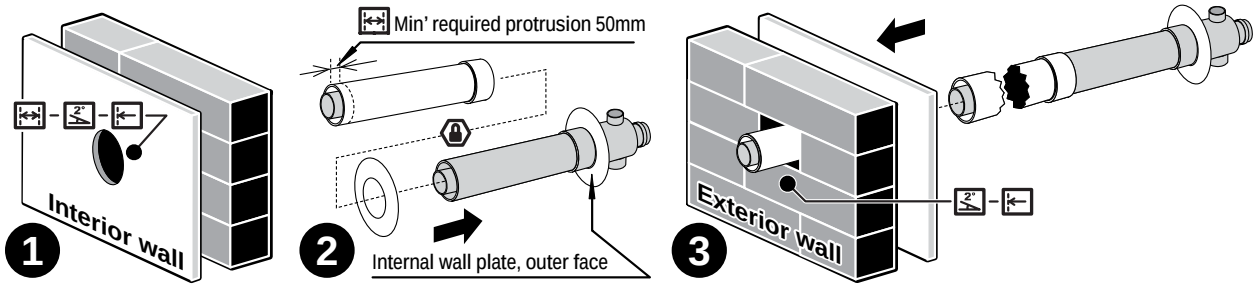
f. Assemble Wall Terminal.

z. Finalise Installation & Commissioning of Heater.

Follow steps 1 through 5 from the chapter "Heater Installation" in the "Rinnai ASPIRATION Operation / Installation Manual" supplied with the heater.

The Direct flue kit 750 (ASPDFK) is suitable for walls up to 385mm thick. For wall thicknesses greater than 385mm Co-ax Pipe(s) (ESPIPE900) can be fastened onto ASPDFK to extend the flue length.

Steps for creating a Direct Extended flue installation are as follows:



1. Create the wall penetration(s) in accordance with the section "WALL PENETRATIONS" on page 6.

   The minimum diameter required for wall the penetration for a DIRECT flue installation is 80mm to noncombustible surfaces such as brick and 100mm to combustible surfaces such as plaster.

   Allow for a continuous 2° fall from the heater connection point to the wall terminal.

2. Join ESPIPE900 to ASPDFK. Fit additional lengths of ESPIPE900 as required.

CAUTION

The joints between ASPDFK and ESPIPE900 and any additional ESPIPE900 lengths MUST BE secured by a pop rivet or screw through the outer co-ax pipes to prevent accidental or erroneous dislodgement. ASPDFK and ESPIPE900 DO NOT require cutting to be joined.

Cutting of components is not required for the purposes of joining and ESPIPE900 to ASPDFK or other ESPIPE900.

   Slide the internal wall plate over the terminal end of the assembled flue pipe until it is nested on the raised ring of the flue transition.

3. Pass the flue assembly through the internal wall penetration until the internal wall plate is flush with the wall.

4. Create the wall terminal in accordance with "ASSEMBLING WALL TERMINAL ~ ASPDFK & ESPIPE900" on page 18.

5. Move the heater into place and make the heater exhaust and combustion air hose connections in accordance with the section "CONNECTING HEATER EXHAUST & AIR SUPPLY" on page 20.

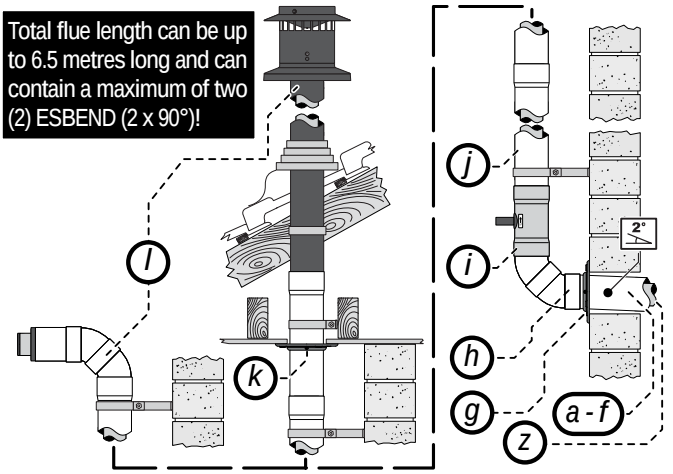
CAUTION

Air hose and heater exhaust connections at the Aspiration heater MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.

6. Follow steps 6 through 11 from the chapter "Heater Installation" in the "Rinnai ASPIRATION Operation / Installation Manual" supplied with the heater and complete the installation and commissioning of the heater in accordance with these.

FLUE COMPONENT ASSEMBLY

CREATING AN "EXTERNAL WALL" FLUE INSTALLATION



Activities for creating an External Wall installation:

a.- f. Refer to steps a. - f. of Creating Direct / Creating Direct Extended Flue Installations (As Required).

g. Assemble Wall Plate.

h. Assemble & Fit Bend.

i. Fit Condensate Drain.

j. Cut, Fit & Secure Components. Seal Joints (As Required). CAUTION

k. Create Vertical Penetrations (As Required).

l. Fit & Fasten Roof Cowl or On-Wall Terminal.

z. Finalise Installation & Commissioning of Heater.

Follow steps 1 through 5 from the chapter "Heater Installation" in the "Rinnai ASPIRATION Operation / Installation Manual" supplied with the heater.

The creation of the horizontal section of flue installation is the same as creating a DIRECT or DIRECT EXTENDED flue installations with the following exceptions:

2° The direction of horizontal fall of the flue pipe is reversed. For Wall External flue installations, a 2° fall is required from the wall penetration towards the heater.

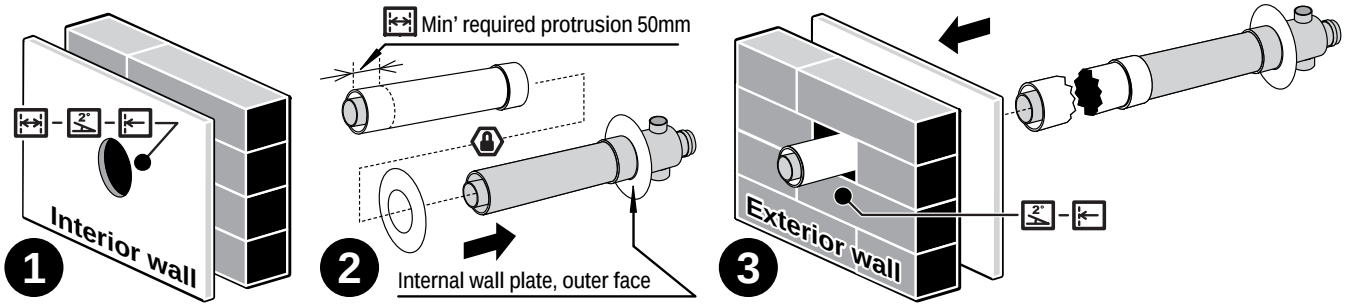
An ESBEND rather than a mushroom flue terminal is fitted at the end of the horizontal flue run.

CAUTION **Sections of flue installation located outside require the following precautions:**

ONLY use PVC cement between joints of the 'outer' PVC flue pipes to secure and seal these joints against ingress of dust and water.

ONLY use non acidic silicone sealant between the joints of 'outer' PVC flue pipes and any mating aluminium components (such as the condensate trap) to secure and seal these joints against ingress of dust and water. Silicone containing acetic acid (vinegar) or other acids as the curing agent may cause corrosion of aluminium components and must not be used.

Steps for creating a External-Wall flue installation are as follows:



1. Create the wall penetration(s) in accordance with the section "WALL PENETRATIONS" on page 6.

   The minimum diameter required for wall the penetration for a DIRECT flue installation is 80mm noncombustible surfaces such as brick and 100mm to combustible surfaces such as plaster.

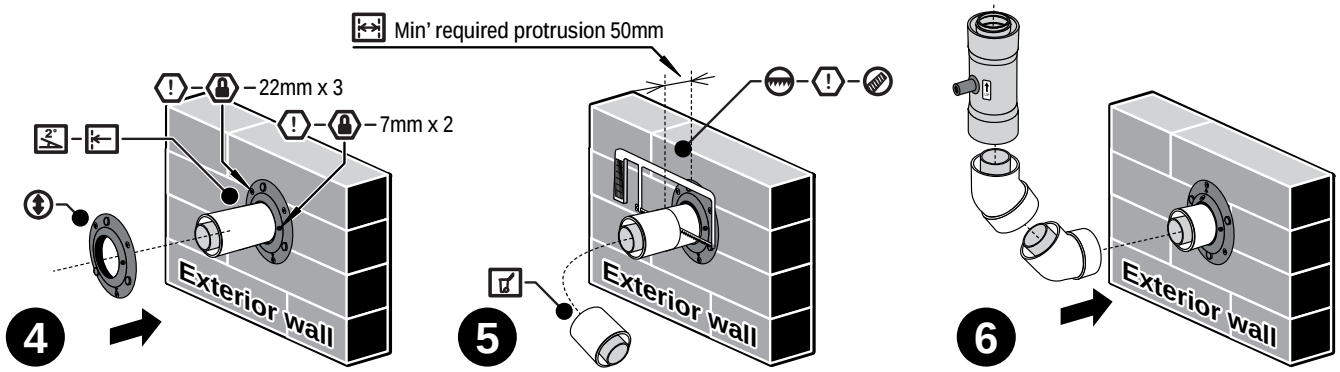
   2° Allow for a continuous 2° fall towards the heater connection point from the external wall penetration.

2. Prepare the 'horizontal' section by following step 2 of "CREATING A "DIRECT" FLUE INSTALLATION" on page 8 or step 2 of "CREATING A "DIRECT EXTENDED" FLUE INSTALLATION" on page 9 depending on wall thickness (*note that a direct extended flue installation example is illustrated above*).

   Slide the internal wall plate over the terminal end of the assembled flue pipe until it is nested on the raised ring of the flue transition.

3. Pass the flue assembly through the internal wall penetration until the internal wall plate is flush with the wall.

FLUE COMPONENT ASSEMBLY



4. Slide the external wall plate over the outer pipe protruding through the exterior wall. Align the arrow symbol to point downwards which will result in a 2° fall of the horizontal section of flue pipe towards the appliance as required.

   Once the external wall plate is in the correct position secure it to the wall using the three 22mm screws into the holes provided. The wall plate is then secured to the outer pipe of the flue protrusion using the two horizontal holes and the two 7mm screws provided.

5. Cut the flue pipe end protruding through the exterior wall in accordance with "CUTTING ~ ASPDFK, ESPIPE900 & ESROOFCOWL" on page 17.

CAUTION

The joints between ASPDFK and ESPIPE900 and any additional ESPIPE900 lengths MUST BE secured by a pop rivet or screw through the outer co-ax pipes to prevent accidental or erroneous dislodgement.

ASPDFK components and ESPIPE900 DO NOT require cutting to be joined.

6. Now prepare the vertical section of the flue system by assembling, connecting and securing ESBEND, ESCONDK and subsequent ESPIPE900 lengths as required in accordance with the relevant sections under "COMPONENT ASSEMBLY & CONNECTION ~ ESBEND" on page 19, "COMPONENT ASSEMBLY & CONNECTION ~ ESCONDK" on page 19 and "COMPONENT ASSEMBLY & CONNECTION ~ ESPIPE900" on page 17.

CAUTION

ONLY use PVC cement between joints of the 'outer' PVC flue pipes to secure and seal these joints against ingress of dust and water.

ONLY use non acidic silicone sealant between the joints of 'outer' PVC flue pipes and any mating aluminium components (such as the condensate trap) to secure and seal these joints against ingress of dust and water. Silicone containing acetic acid (vinegar) or other acids as the curing agent may cause corrosion of aluminium components and must not be used.

Secure the vertical flue sections to the wall using the clips provided to prevent accidental dislodgement.

7. If a vertical roof terminal is used cut in accordance with"CUTTING ~ ASPDFK, ESPIPE900 & ESROOFCOWL" on page 17 and assemble and connect in accordance with "Lubricate all inner pipe O-Rings with the silicone grease provided." on page 19.

   If a horizontal terminal is used cut in accordance with"CUTTING ~ ASPDFK, ESPIPE900 & ESROOFCOWL" on page 17 and assemble and connect in accordance with "ASSEMBLING AN ON-WALL TERMINAL ~ ESWTKIT, ESBEND & ESPIPE900" on page 18.

8. Move the heater into place and make the heater exhaust and combustion air hose connections in accordance with the section "CONNECTING HEATER EXHAUST & AIR SUPPLY" on page 20.

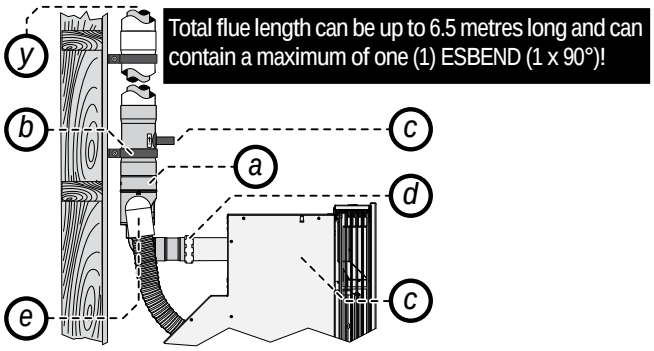
CAUTION

Air hose and heater exhaust connections at the Aspiration heater MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.

9. Follow steps 6 through 11 from the chapter "Heater Installation" in the "Rinnai ASPIRATION Operation / Installation Manual" supplied with the heater and complete the installation and commissioning of the heater in accordance with these.

FLUE COMPONENT ASSEMBLY

CREATING A "INTERNAL WALL" FLUE INSTALLATION



Activities for creating an Internal Wall flue installation:

a. Assemble Flue Adaption Kit 750 (ASPKIT03).

b. Locate, Fit & Secure ASPKIT03 components.

c. Locate Heater.

d. Connect Heater Exhaust. CAUTION

e. Connect Combustion Air Hose. CAUTION *?*

y. Refer to steps j. - l. of Creating an External Wall Flue Installation (As Required).

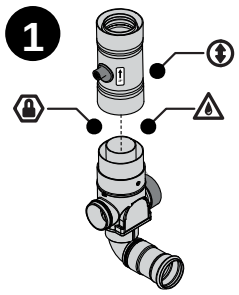
z. Finalise Installation & Commissioning Of Heater.

Follow steps 1 through 5 from the chapter "Heater Installation" in the "Rinnai ASPIRATION Operation / Installation Manual" supplied with the heater.

The Internal-Wall vertical flue installation is installed against an internal wall within a false fire place or other suitable cavity and is run vertically upwards to the termination point. When considering the location of the heater due care must be taken to ensure that the flue path in the roof space are free of obstructions such as studs, noggins, joists, braces, and electricals etc.

CAUTION **To prevent accidental or erroneous dislodgement, the joints between transition assembly (flue transition and condensate trap assembly) and ESPIPE900 components MUST BE clipped to the wall using the stand off clips supplied or other suitable method.**

Steps for creating a Internal Wall flue installation are as follows:



1. Assemble the Flue Adaption Kit 750 (ASPKIT03) joining the flue transition and the condensate components together in accordance with "COMPONENT ASSEMBLY & CONNECTION ~ ESCONDK" on page 19.

CAUTION **The joints between the flue transition and condensate trap MUST BE secured by a pop rivet or screw through the outer co-ax pipes to prevent accidental or erroneous dislodgement.**

The assembled ASPKIT03 is to be clipped using the stand off clips supplied or other suitable method.

ASPKIT03 components and ESPIPE900 DO NOT require cutting to be joined.

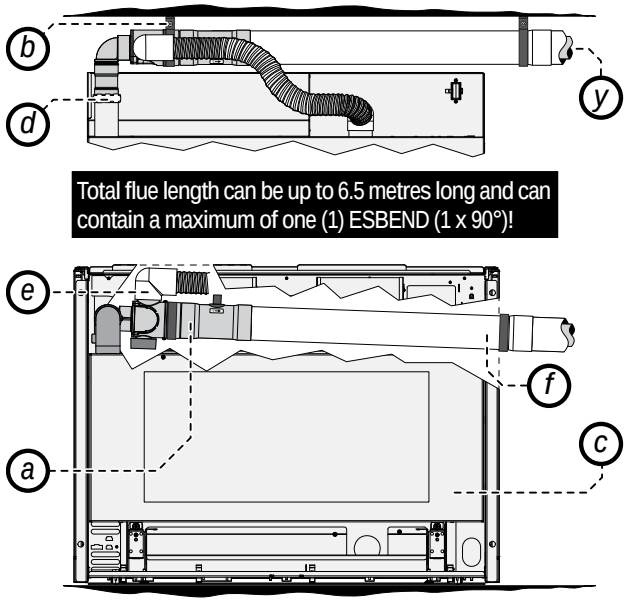
2. Use the section "WALL PENETRATIONS" on page 6 to determine the vertical and horizontal location of the heater's flue exhaust outlet and mount the assembled ASPKIT03 components in this location in an upwards vertical manner.
3. Fit lengths of ESPIPE900 to ASPKIT03 in accordance with "COMPONENT ASSEMBLY & CONNECTION ~ ESPIPE900" on page 17. Determine the location of roof and or ceiling penetration points. To avoid obstructions in the flue path a horizontal offset can be created using ESBEND.
4. Create a vertical roof terminal in accordance with "CUTTING ~ ASPDFK, ESPIPE900 & ESROOFCOWL" on page 17 and assemble and connect in accordance with "Lubricate all inner pipe O-Rings with the silicone grease provided." on page 19.
5. Move the heater into place and make the heater exhaust and combustion air hose connections in accordance with the section "CONNECTING HEATER EXHAUST & AIR SUPPLY" on page 20.

CAUTION **Air hose and heater exhaust connections at the heater MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.**

6. Connect condensate drain tube to heater in accordance with the instructions on page 21.
7. Follow steps 6 through 11 from the chapter "Heater Installation" in the "Rinnai ASPIRATION Operation / Installation Manual" supplied with the heater and complete the installation and commissioning of the heater in accordance with these.

FLUE COMPONENT ASSEMBLY

CREATING A "SIDEWAYS" FLUE INSTALLATION



Activities for creating a Sideways flue installation:

a. Assemble Flue Adaption Kit 750 (ASPKIT03).

b. Locate, Fit & Secure ASPKIT03 components.

c. Locate Heater.

d. Connect Heater Exhaust. CAUTION

e. Connect Combustion Air Hose. CAUTION *?*

f. Cut, Fit & Secure Components (As Required). CAUTION

y. Refer to steps e. & f. of Creating Direct / Creating Direct Extended Flue Installations (As Required).

z. Finalise Installation & Commissioning Of Heater.

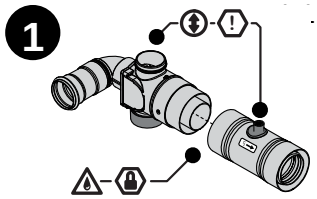
Follow steps 1 through 5 from the chapter "Heater Installation" in the "Rinnai ASPIRATION Operation / Installation Manual" supplied with the heater.

The Sideways flue installation can run along the left or right hand side of the internal wall behind the heater. When considering the location of the heater due care must be taken to ensure that the flue path is free of obstructions such as studs, noggins, joists, braces, and electricals etc.

CAUTION

To prevent accidental or erroneous dislodgement, the joints between transition assembly (flue transition and condensate trap assembly) and ESPIPE900 components MUST BE secured by pop rivet or screw through the outer co-ax pipes and flue pipes are to be clipped to the wall using the stand off clips supplied or other suitable method.

Steps for creating a Sideways flue installation are as follows:



..1. Assemble the Flue Adaption Kit 750 (ASPKIT03) joining the flue transition and the condensate components together. ensure that both the combustion air connection of the flue transition and the condensate drain connection of the condensate trap are aligned with each other, then secure the components together in accordance with "COMPONENT ASSEMBLY & CONNECTION ~ ESCONDK" on page 19.

CAUTION

The joints between the flue transition and condensate trap MUST BE secured by a pop rivet or screw through the outer co-ax pipes to prevent accidental or erroneous dislodgement.

The assembled ASPKIT03 is to be clipped using the stand off clips supplied or other suitable method. ASPKIT03 components and ESPIPE900 DO NOT require cutting to be joined.

2. Use the section "WALL PENETRATIONS" on page 6 to determine the vertical and horizontal location of the heater's flue exhaust outlet and mount the assembled ASPKIT03 components in this location, in a horizontal manner.

   Ensure that when the ASPKIT03 is mounted that both the combustion air connection and condensate drain connection are installed facing upper most.

3. Fit lengths of ESPIPE900 to ASPKIT03 in accordance with "COMPONENT ASSEMBLY & CONNECTION ~ ESPIPE900" on page 17. Determine the location of the wall penetration points.

CAUTION

The joint between ASPKIT03 and ESPIPE900 MUST BE secured by a pop rivet or screw through the outer co-ax pipes and flue pipes are to be clipped to the wall using the stand off clips supplied or other suitable method.

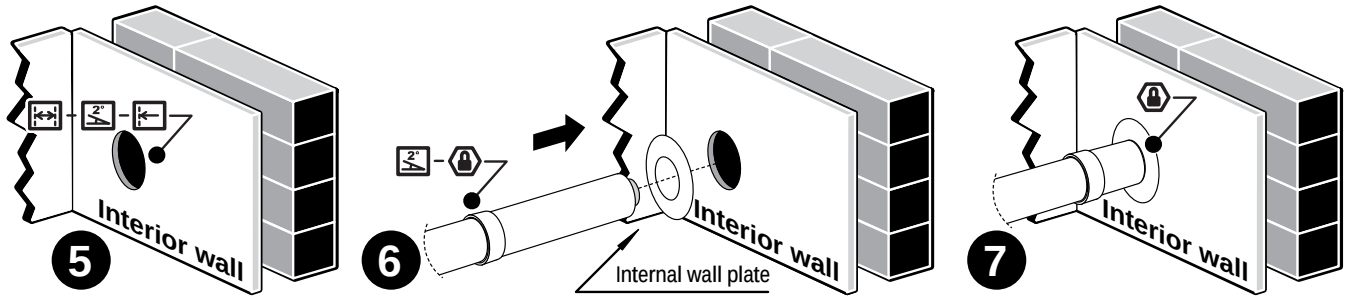
ASPKIT03 and ESPIPE900 DO NOT require cutting to be joined.

FLUE COMPONENT ASSEMBLY

4. Fit additional lengths of ESPIPE900 as required.

CAUTION

The joints between ESPIPE900 lengths MUST BE secured by a pop rivet or screw through the outer co-ax pipes and flue pipes are to be clipped to the wall using the stand off clips supplied or other suitable method. ASPKIT03 and ESPIPE900 DO NOT require cutting to be joined.



5. Create the wall penetration(s) in accordance with the section “WALL PENETRATIONS” on page 6.

   The minimum diameter required for wall the penetration for ESPIPE900 is 80mm.

   Allow for a continuous 2° fall from the heater connection point from to the wall penetration.

6. Slide the internal wall plate supplied with ASPDFK over the length of ESPIPE900 penetrating the wall at the internal wall end. Then pass the assembly through the internal wall penetration.
7. Fasten the internal wall plate to the internal wall.
8. Create the wall terminal in accordance with “ASSEMBLING WALL TERMINAL ~ ASPDFK & ESPIPE900” on page 18.
9. Move the heater into place and make the heater exhaust and combustion air hose connections in accordance with the section “CONNECTING HEATER EXHAUST & AIR SUPPLY” on page 20.

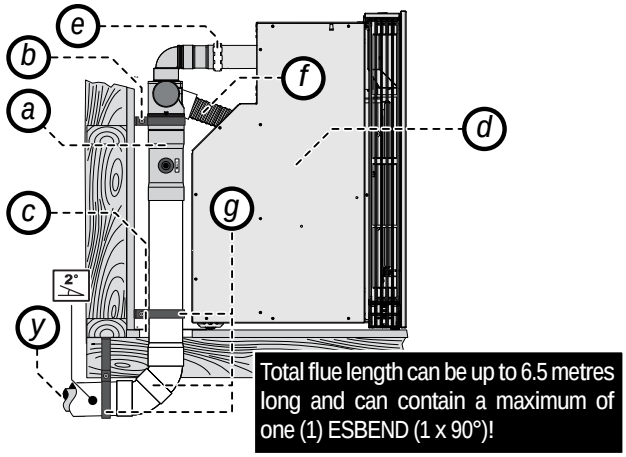
CAUTION

Air hose and heater exhaust connections at the Aspiration heater MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.

10. Follow steps 6 through 11 from the chapter “Heater Installation” in the “Rinnai ASPIRATION Operation / Installation Manual” supplied with the heater and complete the installation and commissioning of the heater in accordance with these.

FLUE COMPONENT ASSEMBLY

CREATING AN "UNDER FLOOR" FLUE INSTALLATION



Activities for creating a Under Floor flue installation:

a. Assemble Flue Adaption Kit 750 (ASPKIT03).

b. Locate, Fit & Secure ASPKIT03 components.

c. Create Penetration in floor.

d. Locate Heater.

e. Connect Heater Exhaust. CAUTION

f. Connect Combustion Air Hose. CAUTION

g. Cut, Fit & Secure Components (As Required). CAUTION

y. Refer to steps e. & f. of Creating Direct / Creating Direct Extended Flue Installations (As Required).

z. Finalise Installation & Commissioning Of Heater.

Follow steps 1 through 5 from the chapter "Heater Installation" in the "Rinnai ASPIRATION Operation / Installation Manual" supplied with the heater.

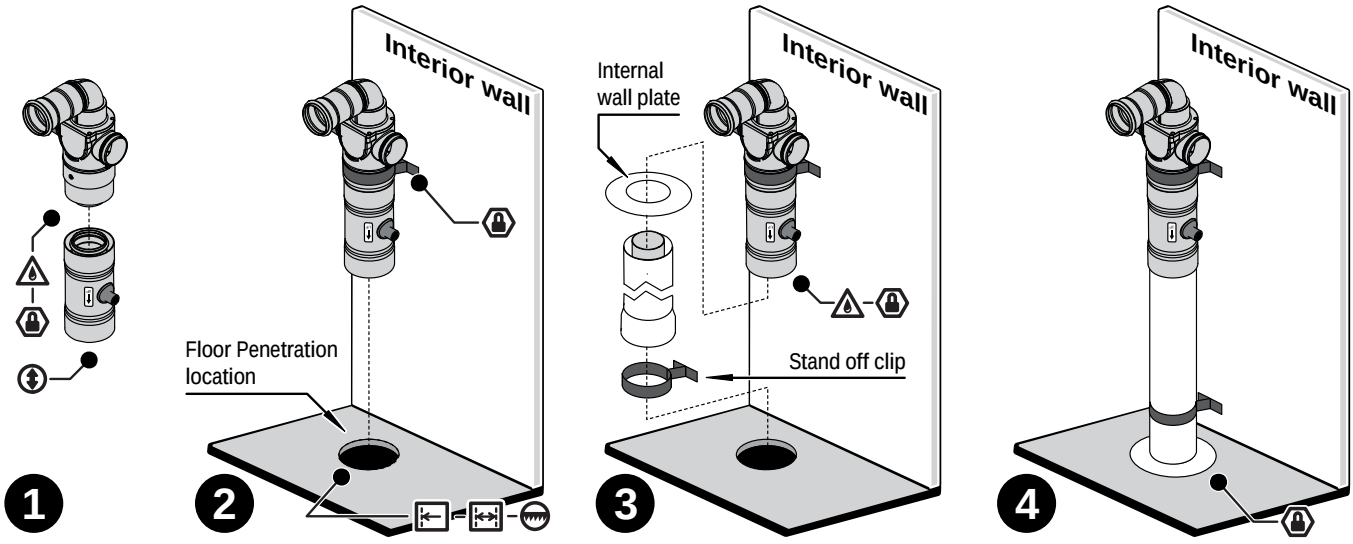
The Down & Out flue option allows for a Flue Adaption Kit 750 (ASPKIT03) to face downwards and the flue to be run vertically though a hole in the floor, and then horizontally to a suitable location outside. When considering the location of the heater due care must be taken to ensure that the flue path under the floor is free of obstructions such as studs, noggins, joists, braces, and electricals etc.

CAUTION

Flue must not terminate under a building.

Flue terminal is only available in the horizontal format.

Steps for creating a Down & Out flue installation are as follows:



1. Assemble the Flue Adaption Kit 750 (ASPKIT03) joining the flue transition and the condensate components together in accordance with "COMPONENT ASSEMBLY & CONNECTION ~ ESCONDK" on page 19.

CAUTION

The joints between the flue transition, condensate trap and ESPIPE900 MUST BE secured by a pop rivet or screw through the outer co-ax pipes to prevent accidental or erroneous dislodgement.

The entire assembly is to be clipped using the stand off clips supplied or other suitable method.

ASPKIT03 components DO NOT require cutting to be joined.

2. Use the section "WALL PENETRATIONS" on page 6 to determine the vertical and horizontal location of the heater's flue exhaust outlet and mount the assembled ASPKIT03 components in this location in an downwards vertical manner.

   Mark off the penetration point through the floor and cut a 80mm Ø hole through the floor at this point. Ensure the hole edges are smooth.

FLUE COMPONENT ASSEMBLY

3. Pass ESPIPE900 through the internal wall plate and through the floor penetration. Then lift ESPIPE900 up and secure it to ASPKIT03 in accordance with “COMPONENT ASSEMBLY & CONNECTION ~ ESPIPE900” on page 17.

CAUTION

The joint between ASPKIT03 and ESPIPE900 MUST BE secured by a pop rivet or screw through the outer co-ax pipes and flue pipes are to be clipped to the wall using the stand off clips supplied or other suitable method.

ASPKIT03 and ESPIPE900 DO NOT require cutting to be joined. However to obtain the desired amount of protrusion beneath the floor cutting of ESPIPE900 may indeed be necessary, if so do this in accordance with “CUTTING ~ ASPDFK, ESPIPE900 & ESROOFCOWL” on page 17?

4. Secure internal wall plate in place to seal the floor.
5. Prepare the horizontal section of the flue system located under floor by assembling connecting and securing ESPIPE900, ESBEND and subsequent ESPIPE900 lengths as required in accordance with the relevant sections under “COMPONENT ASSEMBLY & CONNECTION ~ ESBEND” on page 19 and “COMPONENT ASSEMBLY & CONNECTION ~ ESPIPE900” on page 17.

CAUTION

Joints between ESBEND and ESPIPE900 MUST BE secured by a pop rivet or screw through the outer co-ax pipes to prevent accidental or erroneous dislodgement. Pipes are to be clipped using the stand off clips supplied or other suitable method. ASPDFK and ESPIPE900 DO NOT require cutting to be joined.

6. If required create a wall penetration(s) in accordance with the section “WALL PENETRATIONS” on page 6.

CAUTION

Of special relevance to under floor installations is the requirement to have a minimum of 300mm clearance between the flue terminal and the finished ground level. It is not permissible to excavate a hole to obtain the required 300mm clearance, unless there is sufficient drainage provision.

The minimum diameter required for wall the penetration for ESPIPE900 is 80mm.

Allow for a continuous 2° fall from the heater connection point to the wall penetration.

7. Create the wall terminal in accordance with “ASSEMBLING WALL TERMINAL ~ ASPDFK & ESPIPE900” on page 18.
8. Move the heater into place and make the heater exhaust and combustion air hose connections in accordance with the section “CONNECTING HEATER EXHAUST & AIR SUPPLY” on page 20.

CAUTION

Air hose and heater exhaust connections at the Aspiration heater MUST be made and checked in accordance with these instructions. Improper connections may result in dangerous situations, for example, the dispersion of combustion products in the space being heated.

9. Follow steps 6 through 11 from the chapter “Heater Installation” in the “Rinnai ASPIRATION Operation / Installation Manual” supplied with the heater and complete the installation and commissioning of the heater in accordance with these.

FLUE COMPONENT ASSEMBLY

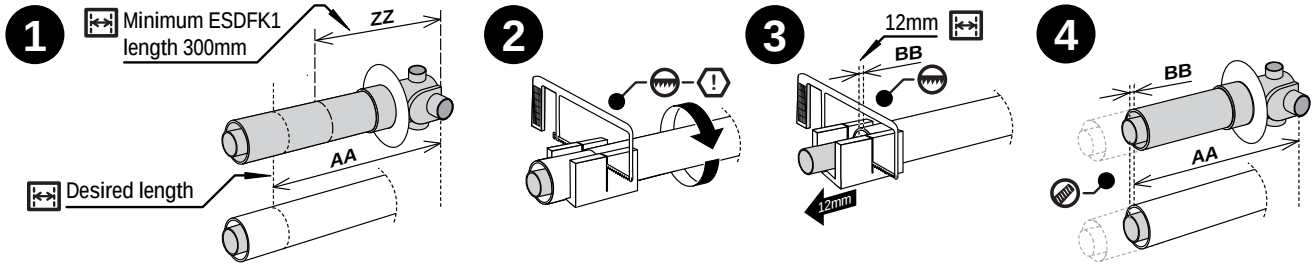
CUTTING ~ ASPDFK, ESPIPE900 & ESROOFCOWL

CAUTION

Cutting is not required for the purposes of joining ASPDFK, ASPKIT03, ESPIPE900 & ESROOFCOWL together

Cutting of the last component in the flue assembly (the component furthest away from the heater) may be required to achieve the required flue system length. Cutting is also required at a wall penetration. Cutting for both purposes is described below:

Cutting components to achieve a desired length



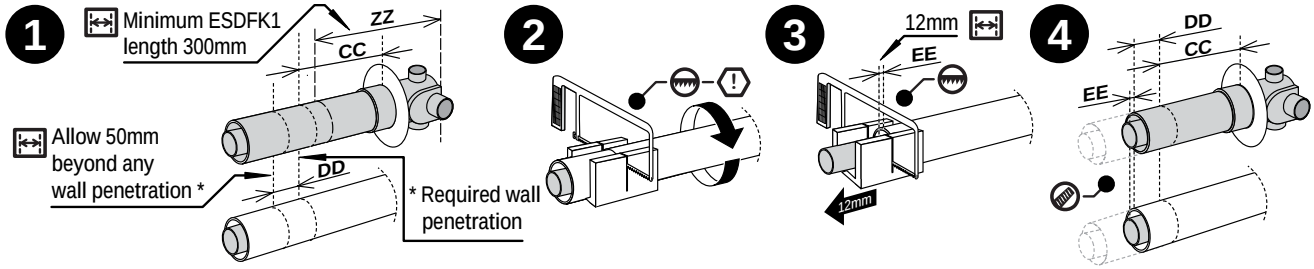
1. Measure and mark off the outer pipe at the desired length **(AA)**.

CAUTION

The minimum length (ZZ) of ASPDFK when measured from the back plate of the casting MUST NOT be less than 300mm when joining to other components.

2. Cut the outer pipe to the required length. Take care NOT to cut the inner pipe.
3. From the 'new' end of the outer pipe (cut in Step 2.), measure and mark off an additional 12mm on the inner pipe **(BB)**. Cut the inner pipe at this mark. Take care to keep the cut parallel with that of the outer pipe.
4. Ensure all burrs and swarf are removed from all cut ends.

Cutting components at a wall penetration



1. Measure and mark off the outer pipe at a point flush with the surface of the wall penetrated (**CC**) PLUS an additional 50mm (**DD**).

CAUTION

The minimum length (ZZ) of ASPDFK when measured from the back plate of the casting MUST NOT be less than 300mm when joining to other components.

2. Cut the outer pipe to the required length. Take care NOT to cut the inner pipe.
3. From the 'new' end of the outer pipe (cut in Step 2.), measure and mark off an additional 12mm on the inner pipe (**EE**). Cut the inner pipe at this mark. Take care to keep the cut parallel with that of the outer pipe.
4. Ensure all burrs and swarf are removed from all cut ends.

COMPONENT ASSEMBLY & CONNECTION ~ ESPIPE900

Lubricate O-Rings with the supplied O-ring grease, then fit the female aluminium inner pipe end over the male inner pipe ends of an adjoining component.

CAUTION

Both the inner and outer pipes of all internal horizontal components MUST BE secured with rivets or screws. The joints of PVC outer pipes that are exposed to an outside environment MUST BE sealed with an appropriate PVC solvent.

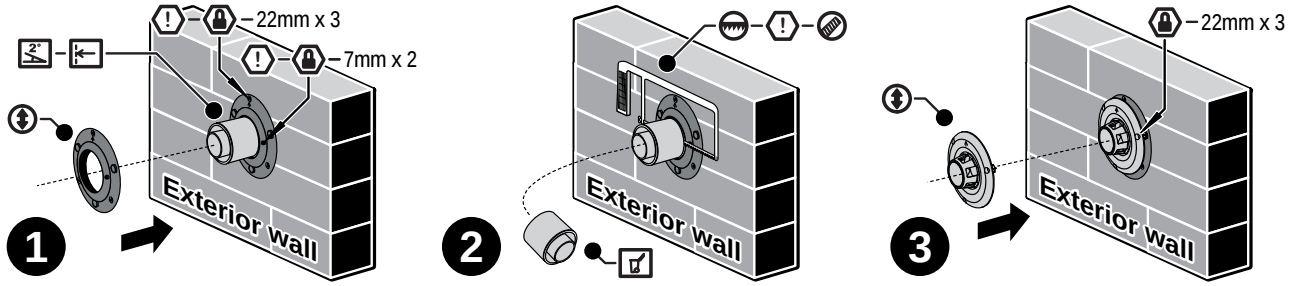
FLUE COMPONENT ASSEMBLY

ASSEMBLING WALL TERMINAL ~ ASPDFK & ESPIPE900

CAUTION

Flue must terminate in accordance with AS/NZS 5601 Figure 6.2. Especially relevant is the requirement to have a minimum of 300mm clearance between the flue terminal and the finished ground level. It is not permissible to excavate a hole to obtain the required 300mm clearance, unless there is sufficient drainage provision.

ONLY the direct flue kit 750 (ASPDFK) and the co-ax pipe (ESPIPE900) can be modified to create a wall terminal.



1. Fit the supplied external wall plate over the outer pipe of the flue protrusion.

   As an installation aid the wall plate has a 2°offset. As such the orientation of the wall plate will set the flue system with either a 2° fall or rise as required. Set the flue system with a 2° fall away from the heater by aligning the arrow symbol so that it is upper most.

   Once the external wall plate is in the correct position secure it to the wall using the three 22mm screws into the holes provided. The wall plate is then secured to the outer pipe of the flue protrusion using the two horizontal holes and the two 7mm screws provided.

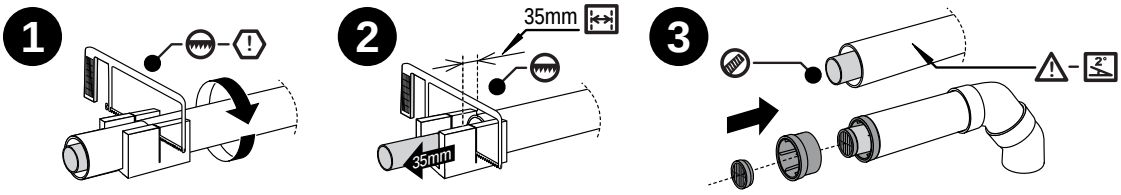
2. Carefully cut through the outer and inner pipes of the flue protrusion as close to the external wall plate as possible. Take care to avoid cutting the external wall plate and keep the cuts of both internal and external pipes as parallel as possible. All burrs and swarf are to removed from all cut ends.

3. Align the arrows of the metal mushroom flue terminal and the wall plate to point in the same direction and screw the terminal to the external wall plate using the 22mm screws into the holes provided.

ASSEMBLING AN ON-WALL TERMINAL ~ ESWTKIT, ESBEND & ESPIPE900

CAUTION

The creation of an on wall terminal can only be achieved by using a combination of ESWTKIT, ESBEND and ESPIPE900 flue components.



1. Measure off the required terminal length then mark off for cutting allow an additional 50mm for joining to other components. Cut the outer pipe at this mark. Take care to NOT cut the inner pipe while cutting the outer pipe.

2. From the end of the cut outer pipe measure off an additional 35mm on the inner pipe and mark off for cutting.

3. Ensure that burrs and swarf are removed from all cut ends. Attach the pipe spacer to the outer pipe and the flue outlet grill to the inner pipe. When preparing an on wall terminal ensure a continuous 2° fall from the flue termination point back towards the heater (condensate trap).

CAUTION

For the on wall terminal it is CRITICAL that the inner pipe components are secured with rivets or screws and that the joints of PVC outer pipes are sealed with an appropriate PVC solvent.

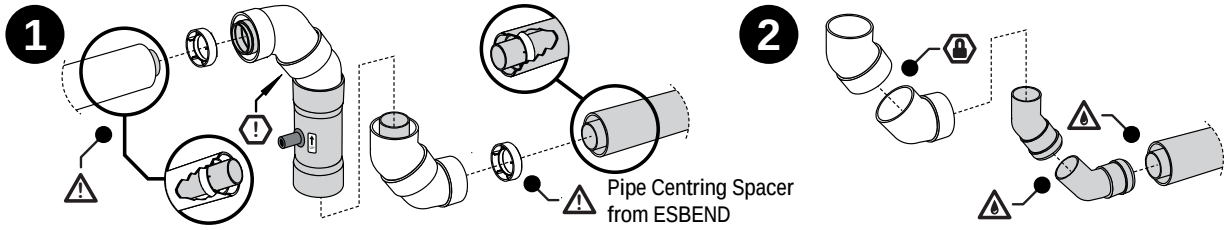
FLUE COMPONENT ASSEMBLY

COMPONENT ASSEMBLY & CONNECTION ~ ESBEND

CAUTION

ONLY use PVC cement between externally located joints of PVC pipes to secure and seal these joints against ingress of dust and water.

ONLY use non acidic silicone sealant between externally located the joints of PVC flue pipe and any mating aluminium components (such as the condensate trap) to secure and seal these joints against ingress of dust and water. Silicone containing acetic acid (vinegar) as the curing agent or other acids may cause corrosion of aluminium components and must not be used.



1. A white plastic centering spacer is provided with ESBEND and is required for correct alignment of co-axial components. ⚠ The spacer is always positioned inside the component that joins the female end of ESBEND.

   A second spacer is provided for use with extend offset intallations and is positioned inside the component that joins the female end of ESBEND, This spacer is not required when adjoining the two ESBEND components.

2. ⚠ Lubricate ESBEND inner pipe O-Rings and fit to the inner pipe of preceding component.

   When fitted correctly the inner and outer pipes of ESBEND will be self centering.

CAUTION

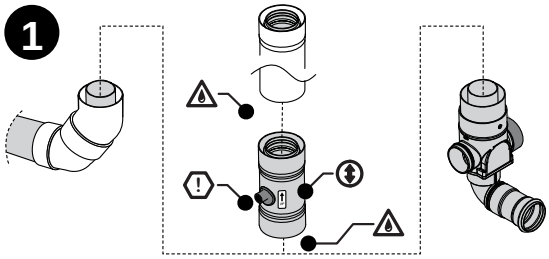
On "Direct", "Direct Extended" and "External Wall" installations 2 ESBEND (2 x 90°) can be used.

On "Sideways", "Under Floor" and "In-Wall" installations 1 ESBEND (1 x 90°) can be used.

COMPONENT ASSEMBLY & CONNECTION ~ ESCONDK

CAUTION

ONLY use non acidic silicone sealant between externally located the joints of PVC flue pipe and any mating aluminium components (such as the condensate trap) to secure and seal these joints against ingress of dust and water. Silicone containing acetic acid (vinegar) as the curing agent or other acids may cause corrosion of aluminium components and must not be used.



1. ⚠ All "External Wall", "Internal Wall", "Sideways" and "Under Floor" flue installations **MUST** be fitted with ESCONDK.

   Observe the correct orientation of ESCONDK. The arrow symbol **MUST** point away from the heater towards the termination of the flue system.

   ⚠ Lubricate all inner pipe O-Rings with the silicone grease provided.

CAUTION

For details concerning the connecting of the condensate drain see page 26.

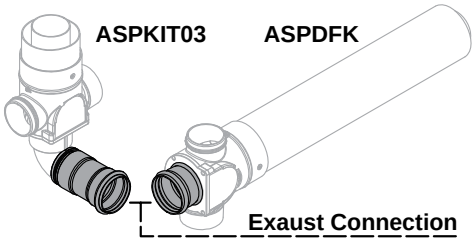
COMPONENT ASSEMBLY & CONNECTION ~ ESROOFCOWL

When connecting an ESROOFCOWL to other flue components use the same methods as described for connecting ESPIPE900 and observe the clearance requirements detailed in the section "REGULATIONS, CLEARANCES & GENERAL INFORMATION" on page 2.

CONNECTING HEATER EXHAUST & AIR SUPPLY

CONNECTING HEATER EXHAUST

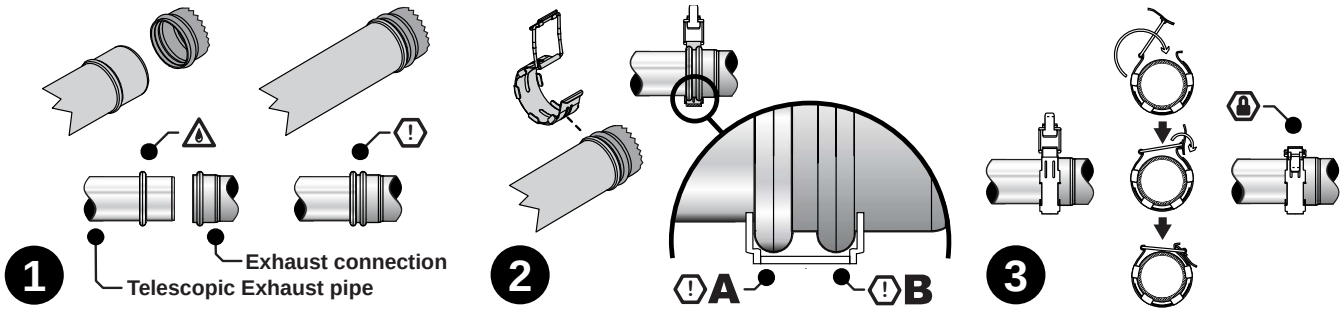
This section describes how to connect the exhaust pipe from the Aspiration heater to the exhaust connection on flue transition ASPDFK or ASPKIT03.



CAUTION

This joint MUST BE properly secured in accordance with these instructions using the clips provided.

If this joint is not secured properly, products of combustion could disperse into the room being heated which may result in a dangerous condition.

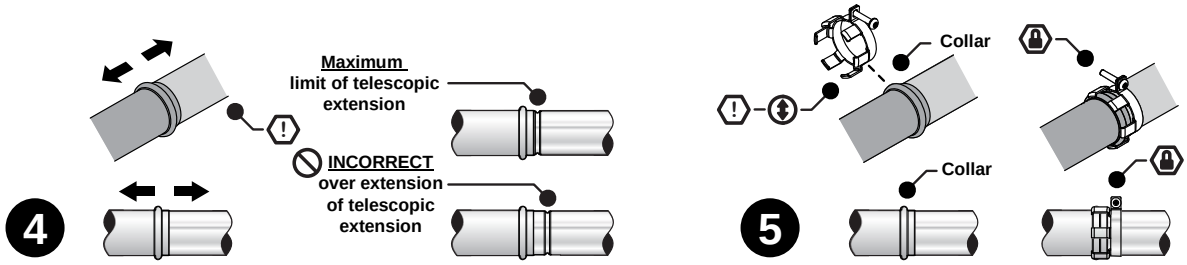


1. Lubricate the O-Ring of the exhaust connection and fit the telescopic exhaust pipe of the heater.

   Push the telescopic tube fully home so that the end of the exhaust connection and the collar of the telescopic exhaust pipe are fully mated.

2. Attach the flue locking clamp provided with the heater over the telescopic exhaust pipe and the exhaust connection of the flue transition. Ensure that the teeth of the flue locking clamp engage both **A** the collar of the telescopic exhaust pipe and **B** the collar of the exhaust connection of the flue transition.

3. Close the clamp to secure both components together.



4. Adjustable the telescopic exhaust pipe to attain the desired position of the heater, **DO NOT** extend beyond the indicator groove.

5. Fix the telescopic exhaust in place with the exhaust lock. The clamp of the exhaust lock is attached to the telescopic exhaust pipe whilst the finger tabs are secured around the collar of the fixed part of the exhaust.

CONNECTING COMBUSTION AIR HOSE

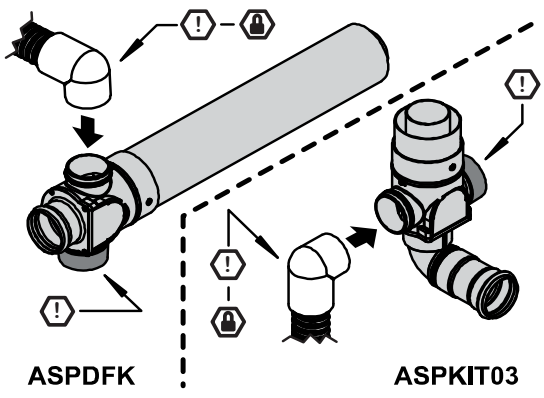
The combustion air hose of the heater is attached to the large diameter combustion air inlet.

CAUTION

Secure the combustion air hose to the combustion air inlet with cable tie supplied with the heater.

The air hose MUST BE properly secured in accordance with these instructions for safe and reliable operation of this heater.

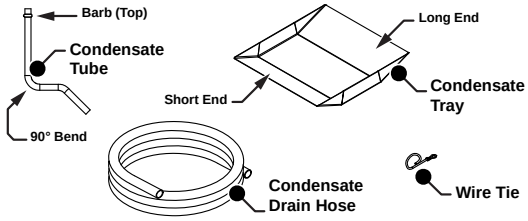
The rubber cap (when supplied) is designed to fit both the left and right hand combustion air inlet and MUST cover the air inlet not in use.



CONNECTING CONDENSATE DRAIN TUBE TO HEATER

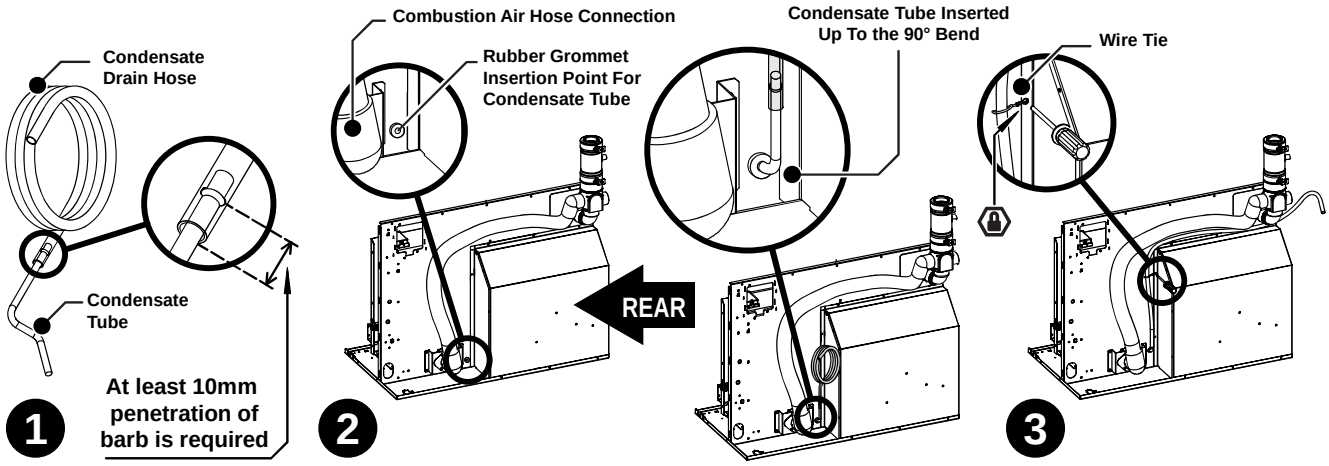
Condensate Drain Kit .

A condensate kit is provided with the heater and will need to be installed for “Internal Wall” flue installations or other vertical flue installations that will require draining of the condensate products back into the heater.



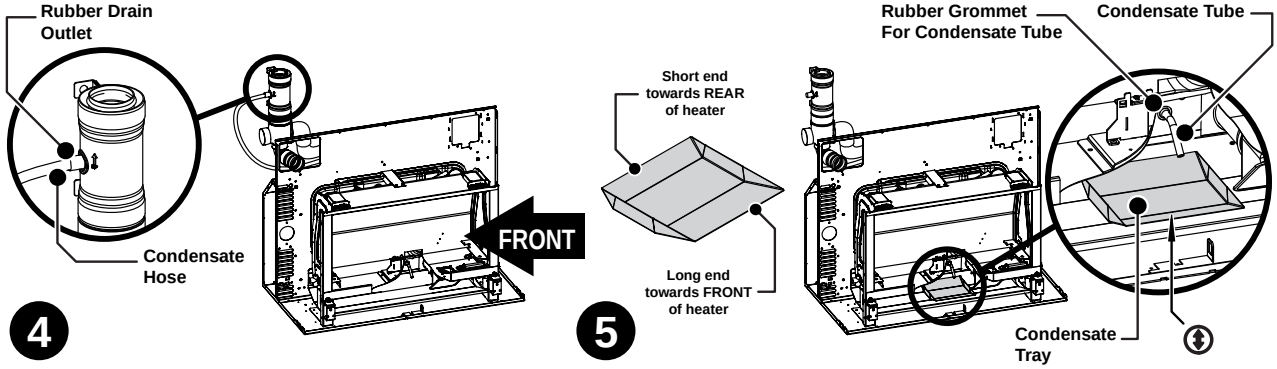
CAUTION **Failure to install the condensate kit correctly may cause damage to the heater and flue system.**

Connection Of Condensate Hose To Condensate Trap



1. Insert the barbed end of the condensate tube into the condensate drain hose, ensure that the barb penetrates the hose by at least 10mm.
2. Locate the condensate tube insertion point, which is a rubber grommet found at the rear of the heater to the right of the combustion air hose connection.

   Insert the condensate tube through the rubber grommet until you reach the 90° bend.
3. Uncoil the condensate drain hose and secure it to the rear of the heater using the upper screw of the combustion fan cover and the wire tie provided.



CAUTION **Before connecting the condensate drain hose to the condensate trap ensure that there are no kinks in the condensate drain hose. Also ensure that the path of the condensate drain hose is kept it away from hot surfaces.**

4. Connect the free end of the condensate drain hose to the rubber drain outlet of the condensate trap by pushing the hose inside the rubber connection to a minimum of 20mm but not greater than 30mm.

CAUTION **Inserting the condensate drain hose into the rubber drain outlet of the condensate trap more than 30mm can cause blocking of the drain-way.**

Installation Of Condensate Tray

5. Place the condensate tray into the heater “short end first” making sure that the tray is centred under the end of the condensate tube that was installed in step 2.

Rinnai

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